AN OVERVIEW OF CAPITAL NEEDS FOR AGRICULTURAL DEVELOPMENT ON METIS COLONIES

RESEARCH & PLANNING DIVISION

HUMAN RESOURCES DEVELOPMENT AUTHORITY

PROVINCE OF ALBERTA

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NEEDS FOR AGRICULTURAL
DEVELOPMENT ON METIS COLONIES

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PREPARED AT THE REQUEST OF

THE HUMAN RESOURCES DEVELOPMENT AUTHORITY

by

Paul Stelmaschuk

Data on Social Assistance Payments was
contributed by Clayton Sauve', and on
Forestry Cover by Leo Regehr

Victor T. Janssen
Head
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ABSTRACT

The report "An Overview of Capital Needs for Agricultural Development on Metis Colonies" examines primarily beef ranching possibilities and alternative coarse grain production. The estimated capital cost of such development follows:

Land Improvement	$5.2 million
Cattle	12.3 million
Machinery and Equipment	5.2 million
Buildings, Fencing and Water	1.7 million
Total Cost	$24.4 million

Since there is no accurate data on the resources or aspirations of residents in isolated communities, about 27 in number, the development costs of these areas are not included in the report; neither are the costs of developing Indian Reserves. A rough estimate of the capital cost for developing the agricultural potential for isolated settlements as well as Metis Colonies would be 50 million dollars.

Four conditions for beef ranching are identified. (1) The condition where all costs are included (i.e. new buildings and machinery, land is developed, cattle is purchased, and with 8% interest charge against all investments as well as depreciation) the 100-beef cow operation yields zero labour return. (2) Under the condition where machinery and building costs are provided by the operator, the return from 100 cows is estimated to yield $2,050 for the operator. (3) Under the condition where land development costs only are removed, the operator can earn $1,850 from a 100-cow beef ranch. (4) The condition where machinery, buildings and land development costs are provided by the operator(s) is most economic. In this condition, the government could provide loans for cattle with a return to the operator of $3,250 annually from 100 cows.

Since there can be many variations and combinations of the above conditions, it is recommended that the government examine each request for agricultural development on a project by project basis. The closer the project is to condition #4, the better the pay-off to the operator. After examinations in the field of the proposed project, better judgement can be made of the possible economic success of the project and the aid which should be extended by the government.

Where the decision is reached to extend financial aid, it is recommended that technical assistance should also be provided. This is very essential for the development of farm and business management competence. It is also recommended that the agricultural development program be "phased-in" over a 5 to 10 year period. This approach would permit the gaining of experience by operators and would permit more flexibility in programing if marketing conditions change.

Both the beef-cow ranch and the coarse grain farming are very marginal operations from the economic standpoint. A two million dollar investment in a trailer factory at Standoff will produce approximately 200 jobs at a cost of about $10,000 per job. By contrast a job in agriculture yielding approximately $3,000 in labour return requires a $60,000 to $80,000 investment. Most of the effort should be in the field of lower cost, higher pay, job formation projects.

However, projects may be approved to alleviate welfare costs and conditions, to provide work experiences, or for other social reasons. Possible savings in welfare costs, under a fully developed agricultural potential, would be $250,000 per year. This is based on the 1969 rate of welfare (about $600 per family) applied to the possible 420 ranch units which may be developed on Metis Colonies.

A CURSORY APPRAISAL OF CAPITAL NEEDS FOR AGRICULTURAL DEVELOPMENT ON METIS COLONIES IN ALBERTA

How much would it cost to develop the agricultural potential on Metis Colonies in Alberta? This question raises a number of other questions and has a great number of implications. What type of farming is the appraisal to cover? What size of particular type of farm operation should be examined? What cost items should be left with the farm operator and what portion of the capital requirement should be a governmental injection? etc.. In addition when agricultural development is undertaken, services (infrastructure) is needed. Additional roads will need to be built, power lines installed, perhaps homes will be needed on the farm units rather than on colonies where prospective farm operators now reside. Because many of the details of the possible agricultural development are not currently known it will be necessary to make assumptions. Where these are made they are explicitly stated.

The discussions between leaders of Metis and Indian people and government officials to date have primarily centered around the desire on the part of the native people to get started in beef ranching. In addition, climate, soils, and market conditions preclude wheat productions in the areas under discussion. Hence, only feed grains and beef ranching are considered in this report. This does not mean that sheep or hog operations are not possible. The appraisal is simply an attempt to produce an estimate of capital requirements and the substitution of other farm enterprizes, of moderate size, with comparatively moderate technological inputs will not materially change the capital requirement estimates.

PADDLE PRAIRIE METIS COLONY #1

Soil Class	1-3	4	5, 6, 7, 0
Acres	44,540	310,600	61,500
Stage of Development			
complete, ac.	5,722	nil	nil
undeveloped, ac.	38,818	310,000	61,500
Forest cover			
easy to clear, ac.[1]	12,939	103,533	Used for
hard to clear, ac.	25,879	207,067	Pasture
Organic, ac. - 14%			
Developmental Cost			
easy to clear @ $25	$323,475	$258,832	Used for
hard to clear @ $50	1,293,950	1,035,335	Pasture
	$1,617,425	$1,294,167	
Possible hay yield			
on easy to clear, acreage	12,939T (1¼T/ac)	103,533 (1T/ac)	used for pasture
on hard to clear acreage	32,347T	207,067	used for pasture

[1] A break-down of forest cover indicates that 56% of the colony has heavy forest cover and 30% has light forest cover. Since data on a soil type basis is not available, it is assumed that the above forest cover ratio holds for all of the soil types. It is also assumed that organic soils (peat bogs) will not be developed in the near future so no land development costs have been assessed against this area.

Possible Number of Beef Farms

A beef cow requires approximately six tons of forage annually. In areas where there are six months of grazing, one half (3 tons) of the forage needs to be put up as hay. If the season permits only five months of grazing, approximately 3.5 tons of hay is required to winter a beef cow. The calculations in this appraisal are on a three-ton hay requirement.

If all of the hard-to-clear acreage is used for pasture as well as the lands classified 5, 6, 7, and Organic, the acreage involved would total 294,000 acres. Assuming that 40 acres of this type of pasture is needed per cow a total of 7,600 cows could be pastured on this acreage. This number of cows would require 22,800 tons of hay and would consume all of the hay that could be produced on soil types 3 or better, plus approximately 10,000 tons of hay produced on class 4 soils. This would leave approximately 90,000 tons of forage which could be produced on class 4 soils and which would support 15,000 head (90,000 divided by 6 tons on a year-round basis). Thus, the total cow population which could be supported on the colony is 20,000, after making feed allowances for bulls and replacement stock.

If one assumes that 100 beef cows constitute a beef ranch unit, approximately 200 units could be supported on the colony. This allows for feed for bulls and replacement stock.

Capital Requirements for Beef Ranch Units

1.	Land Improvement Costs (Assuming all of the easy-to-clear land, class 4 or better is developed at a cost of $25.00 per acre.)	$2,911,800
2.	Livestock Costs (100 cows @ 300 = $30,000 plus 4 bulls @ $400 = $1,600 or a total of $31,600 per ranch unit X 200 units.)	6,320,000
3.	Machinery and equipment costs ($12,425 per ranch unit X 200)	2,485,000
4.	Livestock buildings, fencing, and water facilities ($4,200 per ranch unit X 200)	840,000
	TOTAL	$12,556,800

In addition, operating capital is required in the first year that a business operation is started. These costs on a per cow basis cover gasoline-oil-repairs-insurance ($12.00), grain and millfeed ($8.00), veterinary and medicine ($2.00. On a per ranch unit basis, this cost would be $2,200, or a total of $440,000 per year. Also, since Metis Colony and Indian Reserve residents generally have low incomes it may be necessary to supply living costs in the first year that the operations commence. These are estimated at $2,000 per family. The total amount of money involved for this purpose would be $400,000 ($2,000 X 200). Operating capital and living costs for one year are estimated at $840,000. If the 200 ranch units should be phased in over a ten-year period (20 per year) the injection for these two purposes would be $84,000 per year. This does not include any allowance for depreciation, labour on ranch units, or interest charges

METIS COLONY # 7 - KIKINO AND CASLAN
(South of Lac La Biche)

Soil Class	1 - 3	4	5, 6, 7, 0
Acres	0	19,250	181,750
Stage of Development	-		
- complete, ac.	-	836	
- underdeveloped, ac.	-	18,414	181,750
Forest Cover	-		
- easy to clear, ac.	-	15,099	Used for
- hard to clear, ac.	-	3,315	Pasture
Development Cost	-		
- easy to clear @ $25/ac.	-	377,475	Used for
- hard to clear @ $50/ac.	-	165,750	Pasture
Possible Lay Yield	-		
- on easy to clear acreage	-	15,099	Used for
- on hard to clear acreage		3,315	Pasture

Based on the pasture availability on hard-to-clear class 4 soil and on soils classified 5, 6, 7 and organic, it appears that 4,300 cows can be supported on the colony. This allows for pasture for bulls and replacement stock. 4,300 cows will require approximately 12,900 tons of hay. If all of the easy-to-clear land, class 4 or better, was developed and used for hay production, it would be possible to obtain approximately 15,000 tons of hay. This leaves approximately 2,100 tons of forage which would support 600 cows on a year-round basis and would provide feed for bulls and replacement stock. The total livestock capacity of the Kikino - Caslan Metis Colony is estimated at 4,900 cows or 49 beef ranch units.

Capital Requirements For Beef Ranch Units

1.	Land Improvement Costs (Assuming all of the easy-to-clear land, class 4 or better is developed at a cost of $25/ac.)	$377,475
2.	Livestock Costs ($31,600 per ranch unit X 49 ranch units)	1,548,400
3.	Machinery and equipment costs ($12,425 per ranch unit X 49)	608,825
4.	Livestock buildings, fencing, and water facilities ($4,200 per ranch unit X 49)	205,800
	TOTAL	$2,740,500
5.	If operating costs (see page 4) are covered in the beginning year of operation, the capital required will approximate $250,000 ($4,200 X 49)	$250,000

FISHING LAKE AND ELIZABETH
(South of Cold Lake on the Alberta-Saskatchewan Border)

Forest cover maps are not available for these colonies. Since no refinement can be made in land development costs a summary of estimates made by the Rural Development Research Branch in the B-12 Plan follows:

Total land area 161,000 acres.

Developed, ac.	582	
Acreage to be developed for hay, ac.	9,800;	Hay yield 9,800 tons.
Estimated cost of development	$392,000	
Wooded pasture, ac.	150,618	
Possible cow numbers	3,000	
Possible beef ranch units	30	

Capital Requirements

1.	Land Improvement Costs	$392,000
2.	Livestock Costs ($31,600 per ranch unit X 30)	948,000
3.	Machinery and equipment costs ($12,425 per ranch unit X 30)	372,750
4.	Livestock buildings, fencing, and water facilities ($4,200 per ranch unit X 30)	126,000
	TOTAL	$1,838,750
5.	If provisions were made for the first year of operating, the estimated amount of capital requirements and living costs would total $126,000. ($4,200 per ranch unit X 30).	$126,000

METIS COLONY # 4 - EAST PRAIRIE
(South of Lesser Slave Lake)

Soil Class	1 - 3	4	5, 6, 7, 0
Acres	34,000	15,680	34,560
Stage of Development			
- complete, ac.	792	nil	
- underdeveloped, ac.	29,608	15,680	34,560
Forest Cover			
- easy to clear	4,737	2,509	Used for
hard to clear, ac.	24,871	13,171	Pasture
Development cost			
- easy to clear @ $25/ac.	118,425	62,725	Used for
- hard to clear @ #50/ac.	1,243,550	658,550	Pasture
Possible hay Yield			
- on eacy to clear acreage	5,921 (1¼T/ac.)	2,509 (1T/ac)	Used for Pasture
- on hard to clear acreage	31,088 (1¼T/ac.)	13,171 (1T/ac.)	

If all of the hard-to-clear land, class 4 or better, plus soils classified 5, 6, 7, and organic are used for pasture, the area involved (72,602 ac.) would provide summer pasture for approximately 1,600 cows. The pasture includes provisions for bulls and replacement stock. 1,600 cows will require 4,800 tons of hay. This would leave approximately 3,600 tons of forage, if all of the easy-to-clear land was developed, and would support 500 cows on a year-round basis. The total livestock capacity of the East Prairie Metis Colony is estimated at 2,100 cows or 21 beef ranch units.

Capital Requirements for Beef Ranch Units

1.	Land Improvement Costs (Assuming all of the easy-to-clear land, class 4 or better is developed at a cost of $25.00 per acre.)	$181,150
2.	Livestock costs ($31,600 per ranch unit X 21)	663,600
3.	Machinery and equipment costs ($12,425 per ranch unit X 21)	260,925
4.	Livestock buildings, fencing, and water facilities ($4,200 per ranch unit X 21)	88,200
	TOTAL	$1,193,875
5.	If provisions were made for the first year of operating capital requirements and living costs the estimated amount required would be $88,200 ($4,200 per unit X 21)	$88,200

The above estimates do not include any allowance for depreciation, interest, or labour. See report on the Gift Lake and Big Prairie Colony.

METIS COLONY # 3 - GIFT LAKE & BIG PRAIRIE
(North of Lesser Slave Lake)

Soil Class	1 - 3	4	5, 6, 7, 0
Acres	10,880	208,270	186,990
Stage of Development			
- complete, ac.	937	290	nil
- undeveloped, ac.	9,943	207,980	186,990
Forest Cover			
- easy to clear, ac.	4,573	48,591	Used for
- hard to clear, ac.	5,370	159,389	Pasture
Development Cost			
- easy to clear @ $25/ac.	114,325	1,214,775	Used for
- hard to clear @ $50/ac.	268,500	2,969,450	Pasture
Possible Hay Yield			
- on easy to clear acreage	5,716	48,591	Used for
	(1¼ T/ac.)	(1 T/ac.)	Pasture
- on hard to clear acreage	6,712	159,389	
	(1¼ T)	(1 T)	

Based on the pasture availability on hard-to-clear acreage, soils class 4 or better, and on soils classified 5, 6, 7, and organic, it appears that approximately 8,000 cows can be supported on the colony. This allows for pasture for bulls and replacements. 8,000 cows will require approximately 24,000 tons of hay. If all of the easy-to-clear land, class 4 or better, was developed and used for hay production, it would be possible to produce approximately 54,000 tons of hay. This leaves 30,000 tons of forage which would support an additional 4,000 cows (Allowing for bulls and replacement stock feed) on a year-round basis. The total livestock capacity of the colony is estimated at 12,000 cows or 120 beef ranch units.

Capital Requirements for Beef Ranch Units

1.	Land Improvement Costs (Assuming all of the easy-to-clear land, class 4 or better is developed at a cost of $25.00 per acre)	$1,329,100
2.	Livestock Costs ($31,600 per ranch unit X 120)	3,792,000
3.	Machinery and equipment costs ($12,425 per ranch unit X 120)	1,491,000
4.	Livestock buildings, fencing, and water facilities ($4,200 per ranch unit X 120)	504,000
	TOTAL	$7,116,000

5. If provisions were made for the first year of operating capital requirements and living costs the estimated amount required would be $504,000 ($4,200 X 120)	$504,000

The above items do not include any allowance for depreciation, interest, or labour. These items are considered later in assessing the profitability of a beef-cow herd. The depreciation and interest are part of the $90 cost assessed against each cow in the herd--a figure used later in this report.

SUBSTITUTION OF GRAIN UNITS FOR BEEF RANCH UNITS

All of the Metis Colonies with exception of the Fishing Lake Colony are north of the 54 parallel (latitude). Fishing Lake itself borders on the 54th parallel and is similar to the other colonies in climatic conditions. The attached map indicates that all the colonies are in the 3 H and/or 5 H climatic zone. These zones are characterized by adequate precipitation but have growing seasons too short for wheat production. This makes only early maturing feed grains (barley and oats) feasible on the colonies.

When grain farming is introduced, it is likely that the forage capacity of the colony is decreased by the portion of land assigned to grain. Although some grain farming is likely to be carried on in conjunction with beef farming, it is also likely that capital, land, and labour assigned to such grain production will curtail beef operations on that unit. In other words, it is assumed that resources are limited and that there will be a substitution among the allocation of such resources.

It is estimated that a 100 beef-cow ranch unit could yield $200 in labour return, assuming a 90% calf crop, a 400 pound calf weaned in the fall and a price of 30¢ per pound for calves. (Annual cost per cow, fixed and variable = $110 X 100 cows = $11,000. Annual returns: 90 calves X 400 valued at 30¢/lb. = $10,800. Approximate return = $200.)

Farm management records indicate that a grain farm approximately 600 acres in size in the Peace River Block yields a labour return of $750[1/]. The capital investment in these farms was $80,000. By comparison, 600 acres of land devoted to a 100 beef-cow ranch would require $64,000 of capital and would yield $200 in terms of labour return. Both operations are very marginal from the economic standpoint. It should be noted that both agricultural enterprizes are capital intensive and that $60,000 to $80,000 invested in job formation outside the field of agriculture appears to hold more promise. For example, $2 million investment in a trailer factory at Standoff Blood Indian Reserve, created 200 jobs, or at a cost of $10,000 per job.

[1/] p. 15, 22, Alberta Farm Business Analysis Report, 1967.

5,2,3 10

167) 24,476,225

23 35

1096

934

1620

1601

14

2192

167
225
2355

52,000
.06

3,120,00

SUMMARY

	Fishing Lake--Elizabeth	Kikino--Caslan	East - Prairie	Gift Lake--Big Prairie	Paddle Prairie	Totals
Land Improvement	394,000	377,475	181,150	1,329,100	2,911,800	5,191,525
Cattle	948,000	1,548,400	663,600	3,792,000	5,320,000	12,272,000
Machinery and Equipment	372,750	608,825	260,925	1,491,000	2,485,000	5,218,500
Buildings - fence, water	126,000	205,800	88,200	504,000	840,000	1,764,000
Sub Total	1,838,750	2,740,500	1,193,875	7,116,100	11,556,800	24,446,025
Operating and living costs	126,000	205,800	88,200	504,000	840,000	1,764,000
TOTAL	1,964,750	2,947,300	1,282,075	7,620,100	12,396,800	26,210,025
Population [1]	523	934	224	713	405	2,799
Family Units [1]	88	156	37	119	67	467
Welfare per Family [1]	$ 604	$ 826	$ 550	$ 429	$ 563	
Average Family Income [1]	$2,812	$2,443	$3,820	$3,306	$3,403	
Feasible Ranch Units	30	49	21	120	200	420

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[1] 1969 figures: welfare includes social asistance and family allowance payments.

CONCLUSIONS

The requests from areas like Lac La Biche have been for loan funds to purchase cattle. The farms involved already have some buildings (crude in most cases) which can be used for housing the livestock. They also use streams and lakes for water provisions. In addition, some owners have some of the machinery included in Condition # 1 in the Appendix. Also, the practice of clearing of land increases land values. If easy-to-clear land is developed at the cost of $25.00 per acre it should, based on past land market performance, add $25.00 to the land value. Cleared land can be considered an investment in Alberta providing that the land is not abandoned but continues to be used in the developed state. The developed land can thus be viewed as added wealth in the province and as such is not necessarily a cost item particularly since it has appreciated in value at the rate of 8% annually in the period 1956-66.

Hence, it is possible to reduce the total capital investment as presented in the budget but the amounts of reductions can not be determined until specific project proposals are made and funds are solicited for those projects.

In addition, it will be vitally important to provide farm management services in any developmental scheme to make sure that the livestock and crop practices are implemented. It would be adviseable to start the developmental projects in modest terms and to aid the growth of the projects as technical and management competence is developed and as these are expressed in practice. This would prevent financial losses and also permit development of individuals based on their competence and motivation for progress.

Secondary costs and secondary benefits are not assessed in this appraisal. Infrastructure which may be required includes roads, power and telephone. If one was to examine the infrastructure costs, it would also be necessary to document secondary benefits from creation of jobs in packing plants, grocery stores, etc; reduced welfare costs; and the added value of products for the consumers (reduction in the cost of living). The budget provided herein is based on primary costs and primary benefits.

It should be noted that additional income possible, under certain conditions as discussed in this paper would add considerably to the income of the Metis families on colonies. Since the initial contacts with native people indicate that their desire is for approximately 25 cows it appears

that five to ten years will be required to develop 100 cow-herds. This means that the program outlined in this paper may be phased-in over a period of 5 to 10 years. The total cattle numbers when the program is fully developed could reach 42,000. In view of the time period and the number of livestock involved this will not adversely affect the demand or the price of beef cattle in the market place.

The phasing-in of the program would also reduce the initial demand for capital and provide time which will be essential to gain experience with these operations.

If the only demand from Metis people is for loans to purchase cows then the total cost of this component of the program would reach $12.2 million. Phased-in over a ten-year period, the annual cost would become $1.2 million. In addition, this money would be repaid to the province under loan arrangements. Any land development costs may be balanced off by the increased value of the land. Water facilities, are likely to be provided through PFRA (a federal program). A likely additional requirement would be fencing. If rough lumber or even slabs are available locally and operators use their own labour, the building cost estimates may be reduced by approximately one-half. Where conditions are close to those described in the appendix as Conditions # 2, 3, or 4, there is a positive labour return. Condition # 1 is not economically feasible.

It should be pointed out that good beef cows are currently difficult to obtain. Before bred cows are purchased, they should be examined (bumped) by a veterinarian to ensure that they are with calf. Other similar management practices are essential to ensure the success of a ranching operation. Also, sound business practices are needed in record keeping, buying, selling, etc. Any loans extended for ranching purposes should be accompanied by consulting services to ensure a successful enterprise.

Both the beef-cow ranch and the coarse grain farming are very marginal from the economic standpoint. They are capital intensive enterprises. Job formation in other industries appears to hold more economic pay-off. For example, a two million dollar investment in a trailer factory at Standoff will produce approximately 200 jobs or at a cost of $10,000 per job. However, because of social conditions, such as immobility of some labour, need for work experiences, etc., it may be found adviseable to develop some of the agricultural potential. Examination and approval should be done on a project basis to determine the economic and social conditions.

A full scale agricultural development program as described in the report, comprized of 100-cow beef ranch units, is not recommended at this time. If launched, the program should be "phased-in" over a period of time to ensure development of technologic and management expertise. This means growing into ranch units of the above size in 5 to 10 years.

ALTERNATIVE RANCH CONDITIONS

The requests for financial assistance for ranching arise from a great variety of conditions and a great variety in the stage of development. Some ranchers already have buildings or some of the necessary buildings; others have the machinery or some of the necessary machinery, etc.. Several possible alternative conditions are considered below.

#2. Assuming that the operator has a full compliment of machinery and the necessary buildings removes the immediate need for approximately $16,500 of capital. This assumption necessitates an appraisal of the current value of the machinery, equipment and buildings. If the value is approximately ½ of the new price structure as indicated it would amount to the following:

1)	Machinery and equipment	$6,212
2)	Bldgs. - water - fencing	2,100
		$8,312

Interest and depreciation in this case would be $14.00 per cow.
Deprec: mach. and equip. $6,212 ÷ 10 yrs. = $621 ÷ 100 = $6.21
buildings 2,100 ÷ 20 yrs. = $105 ÷ 100 = 1.05
This condition would yield an additional $14.00 per cow or $1400 per ranch unit.
Adding to this the - $200 of labour return as in Condition #1 the total income for Condition #2 becomes $2058 per ranch unit.

#3. If the land development costs ($15,00 per ranch unit) were not necessary because of plentiful hay supply or if the government selected to forgive such costs an additional reduction in costs of beef production could be realized. This would amount to $12.00 per cow ($15,000 @ 8% = $1200) or $1200 per ranch unit.
Since land values in the past ten years (1956 - 66) have appreciated at the rate of 8% per year the government may chose to forgive interest charges in lieu of land appreciation. If the government also retained title to the crown lands developed the cost of development may be forgiven on the basis that the developed land would be worth as much as the cost of development. This option would only have validity where land will not be abandoned and returned to the native state.
Adding to this the - $200 of labour return as in Condition #1 the total income for condition #3 becomes $1858 per ranch unit.

#4. A combination of owned machinery and buildings plus removal of the land improvement costs is also an alternative.
In this case the income per 100 cow ranch unit would be additive. That is, $2600 per ranch unit ($1400 + 1200).
Adding to this the - $200 of labour return as in condition #1, the total income for condition #4 becomes $3258.

FOUR ALTERNATIVE STRUCTURES FOR A
100 - BEEF COW RANCH

	Condition #1 All-new Operation	Condition #2 Machinery & Bldgs. are now owned & valued at $\frac{1}{2}$ of the new cost	Condition #3 Land Development Costs are Removed	Condition #4 Machinery, Bldgs & Land Costs are Removed
Capital requirements	$63,775	$47,150	$48,775	$31,600
Return to Labour	-$200	$ 2,058	$ 1,858	$ 3,258
Approximate Welfare Payment per Family In 1969	$ 600	$ 600	$ 600	$ 600

APPENDIX

Condition #1 - 100 Beef Cow Herd - All New Operation

Capital Requirement

1. Livestock		$31,600
100 cows @ $300 = $30,000		
4 bulls @ $400 = 1,600		
2. Machinery and equipment		12,425
Feeding equipment: feed bunks 250' x $1 = $250		
hay bunks 250' x $1 = $250		
other = 50		
Field mach: tractor	$4,000	
mounted mower	700	
rake (side delivery)	800	
hay stocker (tractor mounted)	700	
gasoline storage tank (500 gal.)	75	
tools	50	
hay rack and wagon	300	
2 ton truck and stock rack	5,800	
3. Buildings - water facilities - fencing		4,200
pole shed (3000 sq.ft. @ $1)	$3000	
water facilities 1 pit in pasture and ½ of well costs'	1000	
fencing - 1 section of land - 2 mi.	1200	
(assumes neighbors will fence adjoining lands)		
4. Land Improvement (600 ac. @ $25)		15,000
Total Capital Requirements		$63,775

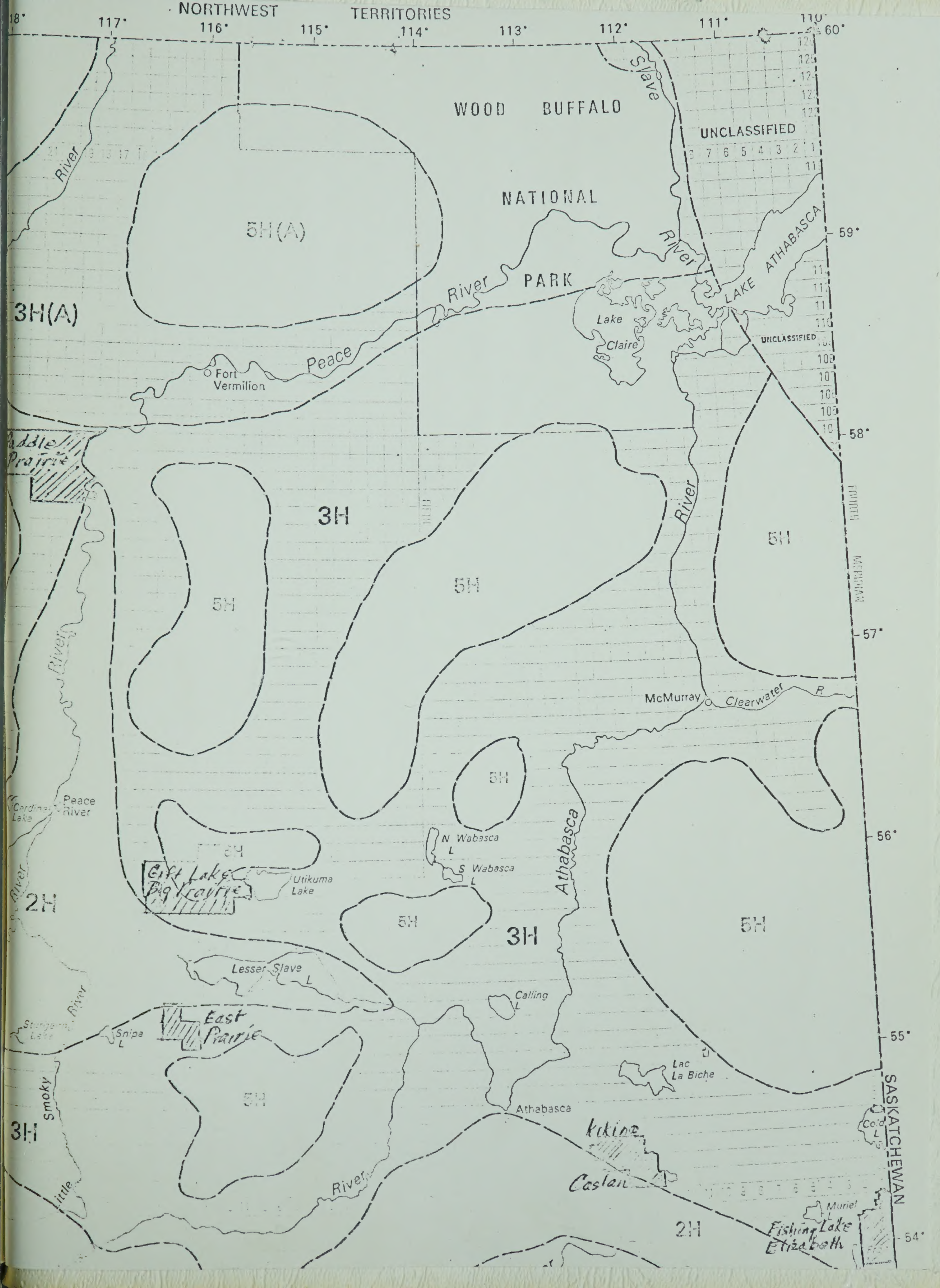
Operating Expenses per Cow

Hay @ $8/ton	$24.00
Vet. & Medicine	3.00
Salt, Min., Vit.	2.00
Breeding	8.00
Pasture & fence maintenance	4.00
Marketing	2.00
Misc. equip. use	2.00
	$45.00

Fixed Costs per Cow

Taxes 8% on land	$13.00
% & deprec'n on cows	24.00
% & deprec'n on bldgs./20yrs. & machinery/20 yrs.	28.00
	$65.00
Total costs per cow	$110.00
Total costs per 100 cows	$11,000.00

Income (per 100-cow unit) (90% calf crop = 90 calves @ 400 lbs. at sale time valued at 30¢/lb. = $10,800)	$10,800
Minus Expenses	11,000
Returns to labour and management per 100-cow unit	-$200


NORTHWEST TERRITORIES
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54°
WOOD BUFFALO NATIONAL PARK
UNCLASSIFIED
Slave River
River
5H(A)
3H(A)
Peace River
Fort Vermilion
Lake Claire
LAKE ATHABASCA
Paddle Prairie
3H
5H
FOURTH MERIDIAN
River
McMurray
Clearwater R
Cardinal Lake
Peace River
N Wabasca L
S Wabasca L
Athabasca
Gift Lake
Big Prairie
Utikuma Lake
2H
Lesser Slave L
Calling L
Sturgeon Lake
Snipe L
East Prairie
Smoky
Lac La Biche
Athabasca
Kikino
Caslan
Cold L
SASKATCHEWAN
Little
River
Muriel L
Fishing Lake
Elizabeth

45.